IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

PA ADVISORS, LLC, Plaintiff, v. GOOGLE, INC., et al., Defendants.	Case No. 2:07-cv-480 (RRR) **Jury Trial Demanded**

SUMMARY JUDGMENT ORDER

Defendants Google, Inc., and Yahoo!, Inc., move for summary judgment of noninfringement for all accused products as to all asserted claims. Because none of the accused products extract "segment[s] representative of a linguistic pattern[s]," the motion is GRANTED. In addition, summary judgment of noninfringement is also appropriate as to claim 1 and its dependent claims on the separate ground that those claims require action by separate parties.

I.

nXn, LLC—formerly known as PA Advisors, LLC—is the owner by assignment of U.S. Patent No. 6,199,067 (the '067 patent) entitled "System and Method for Generating Personalized User Profiles and for Utilizing the Generated User Profiles to Perform Adaptive Internet Searches." The '067 patent was filed in October 1999 by Ilya Geller and claims priority to a provisional application filed in January 1999. The '067 patent claims a method of returning more pertinent Internet search results "reflect[ing] the user's cultural, educational, and social backgrounds and the user's psychological profile" based on historic linguistic patterns identified

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in the user's prior activity. col.3 ll.50-51. According to the '067 patent, prior art search engines typically employed "key word searches" that matched the text of the user's search query with potential websites on the Internet to return results. col.2 l.24. These prior art search engines were deficient because they "only provide[d] the user with search results that depend entirely on the search string entered by the user, without any regard to the user's cultural, educational, professional, and social backgrounds or the user's psychological profile." col.3 ll.40-45.

The '067 patent purports to solve this problem by identifying and storing specific linguistic patterns found in prior user searches or content adopted by the user. As taught therein:

> All texts composed by the user, or adopted by the user as favorite or inimical (such as a favorite book or short story), contain certain recurring linguistic patterns, or combinations of various parts of speech (nouns, verbs, adjectives, etc.) in sentences that reflect the user's cultural, educational, social backgrounds and the user's psychological profile. Research has shown that most people have readily identifiable linguistic patterns in their expression and that people with similar cultural, educational, and social backgrounds will have similar linguistic patterns. Furthermore, research has shown that such factors as psychological profile, life experience, profession, socioeconomic status, educational background, etc. contribute to determining the frequency of occurrences of particular linguistic patterns within the user's written expression.

col.3 ll.46-51. The '067 patent discloses creating a user profile over time containing linguistic patterns identified in prior user activity conducted over the system. col.3 ll.61-66. The user profile therefore contains information representative of the user's general linguistic patterns. Correspondingly, the system identifies and stores linguistic patterns in documents on the Internet. col.3 l.67-col.4 l.5 ("All documents in a remote computer system, such as the Internet, are likewise analyzed and their linguistic patterns and frequencies thereof also extracted and stored in corresponding document profiles.") The system is then able to match the linguistic patterns in the user's profile, the documents on the Internet, and the user's search query to prioritize search results. col.4 ll.6-19. Thus, the user's linguistic patterns theoretically allow the

search engine's search results to match the "user's cultural, educational, professional, and social background as well to the user's psychological profile." col.3 ll.29-32.

On November 2, 2007, nXn filed suit against Google, Yahoo, and several other defendants alleging infringement of the '067 patent. All parties other than Google and Yahoo have since dropped out of the suit. Claims 1 and 45 were the only independent claims asserted. Claim 45 is representative and states:

45. A data processing method for generating a user data profile representative of a user's social, cultural, educational, economic background and of the user's psychological profile, the method being implemented in a computer system having a storage system, comprising the steps of:

(a) retrieving, by the computer system, user linguistic data previously provided by the user, said user linguistic data comprising at least one text item, each said at least one text item comprising at least one sentence;

(b) generating, by the computer system, an empty user data profile;

(c) retrieving, by the computer system, a text item from said user linguistic data;

(d) separating, by the computer system, said text item into at least one sentence;

(e) extracting, from each of said at least one sentence, by the computer system, at least one segment representative of a linguistic pattern of each sentence of said at least one sentence;

(f) adding, by the computer system, at least one segment extracted at said step (e) to said user data profile;

(g) repeating, by the computer system, said steps (c) to (f) for each text item of said at least one text item in said user linguistic data;

(h) generating at least one user segment group, by the computer system, by grouping together identical segments of said at least one segment;

(i) determining a user segment count, by the computer system, for each user segment group of said at least one user segment group, each said user segment count being representative of a number of identical segments in the corresponding user segment group of said at least one user segment group, and linking each said user segment count to the corresponding user segment group of said at least one user segment group;

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(j) sorting the user segment groups of said at least one user <u>segment</u> group, by the computer system, in an [sic] descending order of user <u>segment</u> counts starting from a user <u>segment</u> group having a highest user <u>segment</u> count, and recording said user <u>segment</u> groups and corresponding user <u>segment</u> counts in said user data profile; and

(k) storing, by the computer system, said user data profile, representative of an overall <u>linguistic pattern</u> of the user, in the data storage system, <u>said overall linguistic pattern substantially corresponding to the user's social, cultural, educational, economic background and to the user's psychological profile</u>.

(emphases added to relevant claim terms).   A Markman hearing was held on September 17, 2009, where several disputed terms were addressed, including "text item," "segment," and "linguistic pattern." "Text item" was construed to mean "a series of words that can be split into at least one sentence." "Segment" was construed to mean "one or more parts of speech arranged in an order." And "linguistic pattern" was construed to mean "a combination of various parts of speech (nouns, verbs, adjectives, etc.)." <u>See</u> Dkt. 280 pgs. 27, 26, 16.

Pursuant to the court's motion practice, Google and Yahoo each requested leave to file summary judgment motions of noninfringement—the subject of this order—based in part on the claim construction order. The court granted both requests in early December 2009. The case was soon thereafter reassigned to the undersigned at the end of December.

nXn's infringement contentions span various products and services provided by Google and Yahoo, but can generally be separated into three categories. The first category are Google's and Yahoo's general searching services that examine user queries, information on pages visited by users, and ads clicked by users to prioritize and filter future search results particular to Internet users. The second category are services directed to website operators or publishers— e.g., CNN.com—who have permitted Google or Yahoo to place third-party advertisements on their web pages. Google or Yahoo scan the content on the website or webpage and display peripheral advertisements pertinent to the content scanned. The last category are services that

allow potential advertisers to bid on keywords submitted by Internet users. The potential advertiser submits a text advertisement, keywords, and a bid amount that it is willing to pay if its advertisement is ultimately selected by an Internet user. When an Internet user submits a search query containing one of the advertiser's selected keywords, the advertisement will be displayed if the advertiser is a high bidder in the auction.

II.

A.

This court grants summary judgment when "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. Pro. 56. In reviewing a genuine issue of material fact, this court draws all justifiable inferences in favor of the nonmovant. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986). A dispute is "material" only if it could affect the outcome of the suit under the governing law. Id. at 248–49. In the patent context, although the comparison of the claims to the accused system is a fact question, summary judgment may be granted if no reasonable jury could find infringement. See Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 39 n.8 (1997).

B.

On summary judgment, both Google and Yahoo argue that their accused products do not "extract . . . at least one segment representative of a linguistic pattern" as those terms have been construed by this court. More specifically, defendants contend that none of the accused services identify particular parts of speech (e.g., nouns, verbs, adjectives) from search queries entered by Internet users or any other Internet content. That is, the accused services do not identify a

particular word as a noun, verb, adjective, or whatever other part of speech. Rather, the accused services store words without regard to their parts of speech. Defendants' noninfringement argument therefore hinges on whether the asserted claims require the identification of words as particular parts of speech. Even a cursory review of the specification and claims reveals that they do require identification and storage of parts of speech.

According to the patent, the user first enters or adopts text which is received and stored by the system as a "'sentence'—a collection of words from which linguistic patterns will be extracted . . . ." col.13 ll.36-40. Upon extracting all sentences from the user's text, the claimed system "<u>identifies and tags</u> each word in the retrieved sentence as a particular part of speech (hereinafter 'POS')—i.e., a noun, pronoun, verb etc." col.14 ll.16-19 (emphasis added).

> For example in a sentence "Joe walked to his beautiful home," the [system] would tag "Joe" and "home" as nouns, "walk" as a verb, "to" as a preposition, "his" as a pronoun, and 'beautiful' as an adjective. However, since for the purpose of performing data searches only a few parts of speech are necessary, the [system] preferably only identifies and tags certain predetermined parts of speech such as nouns, verbs and adjectives.

col.14 ll.23-30. The system then "extracts one or more segments . . . that are representative of the linguistic patterns of the sentence." col.14 ll.59-60. The extracted segment can be any length and contain any combination of parts of speech. A segment can consist, for example, of three parts of speech, such as a "noun-verb-adjective" combination. col.14 ll.66-67. The system would then "extract[] noun-verb-adjective segments from each sentence." col.15 ll.3-4. After identifying and tagging all possible "noun-verb-adjectives" from the sentence, the system stores each into its database and searches for previously stored segments that match the particular combination used. col.16 ll.1-5. In that way, the system can determine the frequency of particular combinations to arrive at "a representation of the user's linguistic pattern." col.16 l.9.

The relevant claim constructions reflect this process.   "Linguistic patterns" are recognized in "segments" which are in turn extracted from "text items." "Linguistic patterns" are a combination of various parts of speech (nouns, verbs, adjectives, etc.)." "Segments" are "one or more parts of speech arranged in an order." And "text items" are "a series of words that can be split into at least one sentence." Whereas text items refer generally to words, segments and linguistic patterns refer to particular parts of speech.

Despite the relevant constructions, nXn maintains that words in general are parts of speech without reference to whether they may be nouns, verbs, adjectives, etc. Put differently, nXn contends that the claims do not require any identification of a particular word as a particular part of speech but rather only require identification of plain words which also happen to be parts of speech.   This theory ignores the plain teachings of the '067 patent. In every example or embodiment discussed in the '067 patent's specification, the system must identify and tag words as particular parts of speech. See, e.g., col.5 ll.6-10 ("The system then extracts a linguistic pattern, or a segment, from each sentence characterized by first identifying words in the sentence as being particular parts of speech (i.e. nouns, verbs, adjectives, etc.) . . . ."); col.11. ll.16-19 ("Instead, as was previously explained, the control unit 14 extracts linguistic patterns from the texts rather than the actual information conveyed by the texts."); col.14 ll.17-20 ("The control unit 14, then identifies and tags each word in the retrieved sentence as a particular part of speech (hereinafter 'POS')—i.e., a noun, pronoun, verb, etc."); col.15 ll.1-4 ("the control unit 14 only identifies and tags nouns, verbs, and adjectives"); col.15 ll.17-20 ("Thus, in accordance with the present invention, the control unit 14 extracts every possible noun-verb-adjective segment from the sentence."); col.18 ll.29-31 ("The RCS control unit 34, then identifies and tags each word in the retrieved sentence as a particular part of speech . . . ."); col.18 ll.54-55 ("At a test 316, the

RCS control unit 34 analyzes each word in the sentence as determined of [sic] it is a unique POS."); col.21 l.66–col.22 l.1 ("The RCS control unit 34 then identifies and tags each word in the retrieved sentence as a particular POS—i.e., a noun, pronoun, verb, etc."); col.22 ll.38-39 ("A segment consists of one or more predetermined types of POS arranged in a predetermined order."); col.22 ll.65-67 ("Thus, in accordance with the present invention, the RCS control unit 34 extracts every possible noun-verb-adjective segment from the sentence."). Without identifying and tagging the words as parts of speech, the claimed system would not produce a segment or discover a linguistic pattern. Of course these linguistic patterns then, according to the patent, disclose the user's cultural and psychological profile.

This court has only identified a short sampling of language from the specification. Indeed, at the summary judgment hearing, this court asked counsel for nXn to identify any example or embodiment in the patents where particular parts of speech were not identified or tagged:

> THE COURT: Is there any example in the patent where a part of speech is not identified, not identified, as you're suggesting to me now is the meaning of the patent?
>
> COUNSEL: I haven't gone through to look for that, but I will at the next break and I'll come back to Your Honor and tell you whether or not –
>
> THE COURT: Okay.
>
> COUNSEL: -- there is such an example. But I can't at the moment.

Tr. 98:20 – 99:7. Counsel later admitted:

> COUNSEL: Your Honor asked me before the break to go through the specification and see, does this patent disclose any example where tagging is not—where it does not tag the parts of speech? Your Honor, the specification does not disclose such an example, but the patent as a whole, we submit, would be read that way.

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Tr. 178:4-10. Despite this acknowledgement, nXn still maintains that the asserted claims do not require identification of particular parts of speech. Again, to find otherwise—as nXn urges this court to do—would ignore all the teachings and disclosures of the '067 patent.

Within the context of the '067 patent, the semantics are clear. "Words" are words, and "parts of speech" are parts of speech (e.g., nouns, verbs, adjectives, etc.). nXn's infringement theory depends on conflating the two by suggesting that all words are parts of speech regardless of whether they are identified as such. This court's relevant constructions eliminate nXn's conflation by recognizing "text items" as "words" and "segments/linguistic patterns" as "parts of speech." Indeed, the claim language itself expressly requires extraction of "segment[s] representative of linguistic patterns." The idea that the system only requires identifying words without reference to parts of speech finds no support in the patent. In fact, the '067 patent repeatedly disparages prior art search engines that operate by running "word" searches, referred to in the prior art as "key word" searches:

> However, the key word searching approaches utilized by previously known search engines suffer from a number of significant disadvantages. . . . Most importantly, typical key word and even more advanced searches only provide the user with search results that depend entirely on the search string entered by the user, without regard to the user's cultural, educational, social backgrounds or the user's psychological profile.

col.2 l.56-col. 3 l.2. The '067 patent purportedly solves these problems by using linguistic patterns—not historic word searches—to arrive at a user profile.

nXn next relies on a claim differentiation argument for support. See Nystrom v. Trex Co., 424 F.3d 1136, 1143 (Fed. Cir. 2005) ("[W]hen different words or phrases are used in separate claims, a different meaning is presumed."). In particular, dependant claim 51 states:

> 51. The method of claim 45, wherein said step (e) comprises the steps, performed for each sentence of said at least one sentence, of:

(q) <u>identifying and tagging</u> each word in a sentence as one of a predetermined plurality of different parts of speech; and

(r) arranging a predetermined number of said tagged words in a predetermined order of said predetermined plural different parts of speech to compose at least one segment for each possible combination of said predetermined number of said tagged words arranged in said predetermined order, said at least one segment being representative of a linguistic pattern of said sentence.

Claim 1 has a similar dependent claim. Notably, the words "identifying and tagging" appear nowhere in claims 1 or 45. According to nXn, the omission shows that independent claim 45 does not require particular parts of speech to be identified or tagged.

Significantly, however, claim 51 contains dependent limitations besides the alleged "identifying and tagging" limitation—namely, "<u>a predetermined plurality of different parts of speech</u>." The latter limitation was the subject of much debate during claim construction proceedings. There, the parties disputed whether the claims required the "parts of speech" to be predetermined before conducting a search for segments and linguistic patterns. In other words, the parties argued over whether the claimed invention had to know exactly what parts of speech it was looking for before analyzing a user query. The court ultimately sided with nXn stating:

> As to whether the parts of speech themselves must be predetermined, the specification discloses that "since for the purpose of performing data searches only a few [parts of speech] are necessary, the control unit 14 preferably only identifies and tags certain predetermined [parts of speech] such as nouns, verbs and adjectives." '067 Patent at 14:27-30. A person of ordinary skill in the art would thus understand that different parts of speech might be relevant for different types of searches and for searches of different data. <u>The parts of speech are thus not necessarily predetermined but rather may be determined, for example, during the course of a search. Plaintiff's proposal, on the other hand, could include any "part of a sentence," perhaps a single word or even a punctuation mark, without regard to part of speech or order. The Court thus rejects Plaintiff's proposal, as well. The Court concludes that the construction of "segment" must include some ordering of some parts of speech but that neither the order nor the parts of speech must be predetermined.</u>

(emphasis added). Although not expressly stated at the time, claim 51 gives added support for this conclusion because it further limits claim 1 by adding a "predetermined" limitation. It is this feature of claim 51 that sets it separate and apart from claim 1—not "identifying and tagging." The doctrine of claim differentiation does not require or compel a court to broaden the scope of a claim beyond what is disclosed and taught in the specification. See Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1480 (Fed.Cir.1998) ("[T]he doctrine of claim differentiation can not broaden claims beyond their correct scope, determined in light of the specification and the prosecution history and any relevant extrinsic evidence . . . . [C]laims that are written in different words may ultimately cover substantially the same subject matter."). This teaching is especially true where, as here, the dependent claim can be differentiated with an additional limitation.

Turning now to infringement, Google and Yahoo have proffered unrebutted evidence that their accused products do not identify particular parts of speech. See Horling Decl. Exh. 5 ¶ 12, Jahr Decl. Exh. 6 ¶ 7, Riise Decl. ¶ 6. nXn's expert, Dr. V. Thomas Rhyne, admitted as much during his deposition:

> Q. Do you have an opinion as to whether Google's accused systems recognize or identify words as particular parts of speech?
>
> A. I do.
>
> Q. What is the opinion?
>
> A. They do not, as far as I know.
>
>   *   *   *
>
> Q. Do you know if any of the systems of Yahoo's that you've accused of an infringement used part of speech tagging?
>
> A. I do not know.

Rhyne Dep. 69:4-9 and 38:2-6. Nor has nXn made any such claim on summary judgment. Rather, nXn highlights that Google's system has the ability to recognize non-compositional compounds ("NCCs"). An NCC is a phrase where the individual words have a different meaning when they appear together—e.g., "New York" or "hot dog." Google's system can recognize those types of phrases and store them as a single term. Nonetheless, while the system does recognize such unitary phrases, it still does not recognize them as particular parts of speech. "New York" may be a proper noun, but the system never identifies it as such. As with ordinary words, the system simply stores the phrase without regard to its part of speech.

No other viable infringement theory has been proffered by nXn. This court therefore detects no material issue of fact and determines that Google and Yahoo deserve judgment as a matter of law. Therefore, this court grants summary judgment of noninfringement.

C.

Direct infringement requires a party to perform or use each and every step or element of a claimed method or product. See Warner-Jenkinson, 520 U.S. 17 (1997). For process patent or method patent claims, infringement occurs when a party performs all of the steps of the process or method. Joy Techs., Inc. v. Flakt, Inc., 6 F.3d 770, 773 (Fed. Cir. 1993).

"In BMC Resources, [the Federal Circuit] clarified the proper standard for whether a method claim is directly infringed by the combined actions of multiple parties. [The Federal Circuit's] analysis was founded on the proposition that direct infringement requires a single party to perform every step of a claimed method." Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318, 1329 (Fed. Cir. 2008) (citing BMC Resources, Inc. v. Paymentech, L.P., 498 F.3d 1373, 1378-79 (Fed. Cir. 2007)). But the court in BMC Resources also recognized the tension between this single party standard and the general rule that "a defendant cannot . . . avoid liability for

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direct infringement by having someone else carry out one or more of the claimed steps on its behalf." BMC Resources, 498 F.3d at 1379. Accordingly, where the claim requires action by multiple parties, direct infringement only occurs if one party exercises "control or direction" over the entire process. Id. at 1380-81. A mere "arms-length cooperation" will not give rise to direct infringement by any party. Id. at 1371.

In Muniauction, the Federal Circuit applied the standards set forth in BMC Resources to find noninfringement of a divided claim. Muniauction, 532 F.3d at 1329. There, the patent covered a method for conducting auctions for various financial instruments. The claims, however, required the bidders to submit pricing and interest rate information and the system to subsequently process that information. That is, the claims required separate action by bidders and the system. The Federal Circuit framed the issue as follows: "Under BMC Resources then, the issue of infringement in this case turns on whether Thomson sufficiently controls or directs other parties (e.g., the bidder) such that Thomson itself can be said to have performed every step of the asserted claims." Id. The court went on to hold that the "control or direction" test could be satisfied "where the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by another party" performing the steps of the claim. Id. at 1330. Such a relationship was not present between Thomson and its bidders.

This case presents very similar facts in a claim requiring activity by more than a single party. Independent claim 1 provides in relevant part:

> (c) providing, by the user to the local computer system, search request data
> representative of the user's expressed desire to locate data substantially pertaining
> to said search request data.

col.24 ll.45-49. All of the remaining steps recited in claim 1 are performed by the system—not the user. While Google and Yahoo benefit and invite users to visit their websites and run

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searches, they in no way "control or direct" them once they are there. Significantly, users are free to search as they please. Neither Google nor Yahoo direct users to search or input specific terms or phrases.

In an attempt to avoid the general rule of divided infringement, nXn contends that Google and Yahoo independently perform each step of claim 1 without any action by users. In particular, nXn argues that each: (1) provide the HTML code that allows users to input their search queries; (2) receive and process the search query submitted by the user; and (3) offer search suggestions and spelling corrections after a user has entered information. This court rejects each of these rationales. As to the first two, Google's and Yahoo's method of providing access to user search queries is irrelevant to infringement because claim 1 requires the user to provide to the system query data. The system's actions are meaningless with respect to that limitation. As to the third point, while it is true that searches initiated by Google or Yahoo could be relevant to infringement, neither accused system "initiates" any search. Notably, Google and Yahoo only offer suggestions and spelling changes after the user has begun a search query. In other words, even where search suggestions or spelling changes are provided by the system, the user is still first required to initiate a search query. Moreover, the user continues to choose the course of the search without the "control or direction" of the accused search engines.

In a last ditch effort, nXn resorts to arguments in equity. nXn first highlights that claim 1 could have easily been written to avoid this whole divided infringement issue and therefore it would be unfair to make it an issue now. But the Federal Circuit already rejected the same argument in BMC Resources:

> However, BMC chose instead to have four different parties perform different acts within one claim. BMC correctly notes the difficulty of proving infringement of this claim format. Nonetheless, this court will not unilaterally restructure the claim or the standards for joint infringement to remedy these ill-conceived claims.
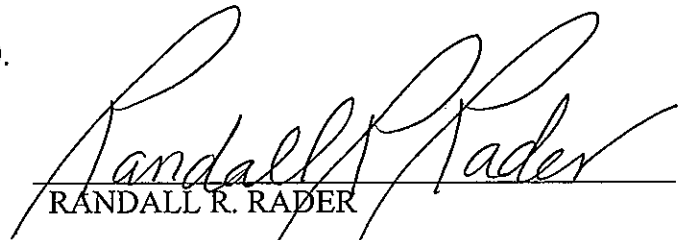
498 F.3d at 1381. Next, nXn contends that principles of equity are generally in its favor and that this court should "suggest that the Federal Circuit, in its review of this ruling, revisit Muniauction with an eye towards avoiding such inequitable results." Again, however, any fault only lies with nXn's prosecuting attorney. Although BMC Resources and its progeny came long after the '067 patent issued, the general principles and rules propounded therein were well settled. Regardless of the equities, the Federal Circuit's precedent is clear in compelling a finding of noninfringement.

<center>III.</center>

No genuine issues of material fact exist. All parties agree as to the operation of the accused systems. It is clear that none recognize or identify particular parts of speech as taught within the context of the '067 patent. Summary judgment of noninfringement as to all asserted claims is therefore **GRANTED**.

It is SO ORDERED.

SIGNED this 11th day of March, 2010.

RANDALL R. RADER
UNITED STATES CIRCUIT JUDGE (sitting by designation)